

The

September 2001

Ballarat Naturalist



Brown Antechinus (Cronin)

Mating Behaviour in Antechinus

Speaker: Femmie Kraaijeveld

Carnivorous marsupials include the phascogales, quolls, dunnarts, Tasmanian Devil and antechinus species. Some species breed once a year, some twice, and in certain species the male dies after mating.

Femmie, a post-graduate student from Holland working at the University of Melbourne's Department of Zoology chose to investigate the mating habits of the Agile Antechinus (*A. agilis*) which lives in Victorian forests. It has recently been identified separately from the Brown Antechinus of NSW (see illustration above).

Her choice was partly determined by the fact that the heathland habitat preferred by the Swamp Antechinus was too disturbed, and a more promising habitat at Wilson's Prom. had been burnt. Dusky Antechinus live at higher, wetter altitudes, while Yellow-footed Antechinus live in box-ironbark forests, both at some distance from Melbourne. Mt. Disappointment, a mountain ash habitat 70 km north of the city near Kinglake N.P. was accessible, with a sufficiently large population of Agile Antechinus.

What are these creatures like? Adults weigh 20-40 gms, while pouch young are about 1 cm long! Females are only in oestrus for 2 weeks and produce 8-10 young; males die after mating. Femmie showed some slides of these tiny creatures and then explained the methodology of her work.

The focus of her research was two-fold:

1. Does multiple paternity occur within litters?
2. Do larger males sire more offspring?

These questions would also test a number of assumptions: that antechinuses are promiscuous; that matings can take up to 18 hours; that sperm storage occurs in females provided that matings last for at least 3 hours; that there is a limited amount of spermatozoa which is used up in 8-9 matings and not replenished, and that the antechinuses nest communally (usually in tree hollows).

The Mount Disappointment site was a 6 ha area divided into a square grid with 196 Elliott traps. Trapped adult antechinuses were identified by notching their ears, while juveniles had their toes clipped! They were weighed, and tissue was taken for DNA testing to determine paternity.

In the first study season, 1999, the sex ratio of trapped antechinuses was 50-50 and it was found that most litters were sired by at least 3 males. However in the second season, 2000, many more females than males were caught and litter paternity involved only 2 or more males.

Femmie concluded that:

- a) 98% of litters were sired by > 1 male.
- b) When the adult sex ratio was biased towards females, the females had mated with fewer males.
- c) When adult sex ratios are equal, females mated with more males.
- d) Heavier males sired more offspring.

Editor.

Excursion: A Natural and Social History of Creswick

Leader: Don Henderson



24 members of the Ballarat and Creswick Clubs were treated to a different kind of day combining natural, social and family history on our excursion, conducted by Don Henderson. With us all sheltering under the verandah of the historic Creswick P.O., he began by telling us that he was born in Creswick and descended from the Henderson and Ross families, the latter arriving on the *Marco Polo*. After showing old photographs of his family, he explained that his father lived in one of the work camps set up for the unemployed in the 1920's—the sussos—who extended St. Georges's Lake.

Those of Anglo Saxon origin were called iron men and the others cosmos (perhaps cosmopolitans?). These sussos were not recorded by the historians of the day. He also mentioned that contrary to some local beliefs there were aborigines in Creswick, as his grandmother remembered as a child going to see them dancing.

We started our excursion by driving down the Melbourne road and turning right into Petticoat Road, signed to Slaty Creek picnic ground. Just before a left turn we visited Hutchins Dam where the Silver Wattles *A. dealbata* were in fine bloom, and were shown from a distance a fissure in the bank in which Kookaburras have been nesting for at least 40 years. Sugar Gliders, Sacred Kingfishers, Owlet Nightjars, Tawny Frogmouths, owls (probably Boobooks) and a number of generations of White Goshawks have been observed here. *Hovea* was noticed, and Genny Binns discovered some Tall Greenhoods *Pterostylis longifolia*. But due to the dull weather, birds were not seen, although Greg Binns heard a White-eared Honeyeater and a Magpie calling. We were told that on the other side of the road was Kahn's Dam named for a man who sold water to the miners.



Boobook Owl
(Hill)

Taking the next left fork down an un-named road and the weather being fine, we scrambled up a rocky bank and taxed our knees to the full, following a track that took us over rocky terrain, to a wide gully where the younger, fitter people acted like goats. The rest of us prepared to just watch them—until John Gregurke sensibly found a much easier route. Thank goodness he did as Don showed us where there had been a Chinese garden. This area known as Humbug Hill produced a view of more flowering plants for us to see such as *Tetralthea*, *Epacris*, Cranberry Heath and *Hardenbergia* and I noticed wallaby scats.

After a quick drink and a bite to eat by those who dared to defy Don's "No smoko" cry, we moved on to the Lincoln Gully Road and a track marked WP which took us to Lincoln Dam which was used as a reservoir for Creswick. This area was extremely interesting as there were fresh water mussels on the dam side covered by a light surface of mud. Here Don told us that they were the same species as those found in Lake Eyre as deduced from consulting a website on the subject. They are capable of revivifying themselves up to 10 years after being stranded when waters receded. He warned us not to eat them because of chemical residues in creeks and soil. More Tall Greenhoods were seen which John Gregurke said were now called the Black Striped Greenhood and Don found scats from



Silver Wattle
Acacia dealbata
(Costermans)

Koalas which had recently been here. A White-throated Tree-creeper became the first bird to be seen, followed by Wood Ducks on the dam.

After missing the rain showers again as we drove to Slaty Creek picnic ground No.1, a welcome lunch and good sit down was appreciated. But not for long as Don's enthusiasm encouraged us to get up and go on to see someone special, his aunty Sally Miller née Buckland who made us very welcome in her warm home. She was born about 75



Manna Gum
Eucalyptus viminalis
(Costermans)

years ago and spent her childhood in Creswick. She was married at 17 and has lived in this area for 60 years. Her husband cut wood and raised cattle and sheep in the early days of their marriage. She bought day-old chooks to raise for themselves and for sale but had a disaster losing them once when the shed caught fire. She and her husband had 5 children, the first one being born at home 10 minutes after returning on the bus, in labour, having been told by Ballarat Base Hospital she still "had a month to go"! The others were born at a nearby nurse's house. We all thought deeply of our own circumstances but wondered if we were any more happy in our complicated lives. She did say, after she was thanked for her stories and the warmth of her house, that she would like to live in the town with water on tap. On leaving we looked again at the beautiful old tree at the entrance and decided it was a Manna Gum, although known as snowy gum by the owners.

Turning into Standard Road and moving through the bush, Don showed us the remains of an old house called Tavistock where pear trees grafted onto hawthorns still stand. On a rocky platform and also in a gully were coral ferns. Quite a lot of *Banksias* were flowering here with more *Tetratheca*, Honeypots *Acrotriche serrulata*, and Nodding Greenhoods *Pt.nutans*. Yellow-tailed Black Cockatoos came into sight. Our last stop was on Kate's Paddock Track, Don's favourite place for birds where we saw Scrub Wrens, a Yellow Robin and Brown Thornbills and a possum's nest in an ivy-covered tree. Then we tramped through the bush to be shown an aboriginal corroboree place (not far from the Creswick Golf Course!) and at least two 40-year old Tree-creeper hollows. After thanks to Don Henderson by our President Carol Hall for such a wide range of informative walks, he asked that we note that there are a lot of people who do not belong to clubs such as ours who are dedicated to conservation. Uplifted after such a stimulating day, we made our muddy, slithery way home.

N.B. The Lincoln Dam is worth visiting on a fine day as we did a week later when we saw *Hardenbergia* in full bloom, and many birds round the dam including White-naped Honeyeaters and a male Golden Whistler gleaming in the sun with a female nearby.

Del McDonnell.

Angair 2001

Wildflower and Art Show

Memorial Hall, McMillan St., Anglesea

Saturday 22nd and Sunday 23rd September 2001

10am—5pm

August Meeting Points

- Lake Wendouree CD: Committee will arrange copying.
- Celebration of Centenary of Federation: agreed that the Club would not participate in the Centenary of Federation parade.
- Ballarat Bushland Book Sub-committee: Carol Hall thanked members who had proofread the drafts of site descriptions.
- North Gardens Wetland: 5 members planted several hundred trees in the area on Tuesday 24 July. Several members attended the official opening on Friday 27 July during which the Mayor acknowledged the contribution of Field Naturalists' Club of Ballarat.

Show and Tell.

Carol Hall: Photographs of the North Gardens Wetland

Field Reports

- Ken Kraaijeveld: The cygnets from spring 2000 which had the best survival rates were those from clutches whose parents monopolised an area of foreshore and remained in that area.
- John Gregurke: At end of July only 2 Swan nests on the lake compared with 30 at the same time last year. Little Bittern flushed from reeds in Convent Corner. White Ibis have 5 nests with 12 eggs in the willows off Windmill Drive, Lake Wendouree.
- Frank Harrap: 200 Yellow-tailed Black Cockatoos flying west to east over Mt Helen.
- Greg Binns: Grey Fantail in garden.
- Belinda Taylor: 13 Black-shouldered Kites hovering in gully near Bacchus Marsh.
- Fran Hanrahan: Echidna on roadside near Navigators.
- Helen Burgess: White-plumed Honeyeater attacking car mirrors at Melton.

- Carol Hall: At Lake Mungo - pair of Major Mitchell Cockatoos house keeping at a hollow in White Cypress Pine, and others eating pademelons; Apostlebirds rolling on their backs; White-backed Swallow, Yellow-plumed and White-plumed Honeyeater, Pied Butcherbird, Bluebonnet and Mallee Ringneck Parrots.
- Bob Curtain: up to 20 Swans crossing Gillies Street.
- John Tadgell: Kookaburra landed on post in garden then crashed into him. Patted while on ground and then flew away.

Welcome to new member Maureen Hazelton. We wish her many interesting hours of natural history observations.

Paddy's Ranges Camp-out October 6-7

Hosted by Maryborough FNC

to publicise the threatened box-ironbark forests.

Music, food, entertainment.

Contact: Kerrie Norris

Mid-month Excursion: Jubilee Mine Historic Area

Greg Binns, Carol Hall, Jack Netherway, John Gregurke and Helen Burgess visited a potential "book" site on a cold grey day. Set amid an open forest of stringybarks, peppermints and wattles are the substantial and extensive remains of the Jubilee gold mines. Together with nearby Staffordshire Reef this area was one of the richest gold-fields in the Ballarat area, producing many large nuggets.

The remains of the quartz crusher, treatment plant and cyanide tanks can be seen along with a large area of diggings and various patterns in the ground which we could not identify. However, the authorities are currently laying footpaths with arrows, and posts ready for interpretive signage. Picnic tables have been recently installed and car parking areas designated. Road signs to the locality are clear and easy to follow.

Further along is Jubilee Dam, with a pleasant picnic site and a walking track around the water; the sounds of unidentified frogs greeted us, and we found many patches of

Nodding Greenhoods *Pterostylis nutans*. *Hardenbergia violacae* was blooming, as was the paler mauve Common Hovea *H. heterophylla*. Tiny patches of Thin-leaf Wattle *A. aculeatissima* lay prostrate beneath Blackwood *A. melanoxylon*, Black Wattle *A. mearnsii* and the odd Hedge Wattle *A. paradoxa*. *Tetratheca ciliata* was flowering as was Golden Bush Pea *Pultenaea gunnii*.

We found Messmate and Brown Stringybarks, Broad-leaved Peppermint, Swamp Gum, and the aptly-named Scentbark. Some Early Nancies *Anguillaria dioica* were out, and large areas of Spreading Flax Lily *Dianella revoluta* will soon colour the lower levels of the forest. The leaves of other orchids were noted, possibly sun orchids. Small Grass Trees *X. minor* were abundant. Common Beard-heath *Leucopogon virgatus* was out, and there were large spreads of bracken. According to the LCC Report, Narrow-leaf Bitter-pea *Daviesia mimosoides* occurs in this area.

Due to the inclement weather few birds were abroad but we heard Spotted Pardalotes and the White-eared Honey-eater, with the occasional scolding of thornbills. Two Swamp Wallabies watched us depart; we had seen signs of echidna scrapes and plenty of scats around, rabbits included. A quick scout around the junction of Lemajic Rd and Victoria Rd produced Myrtle Wattle *A. myrtifolia*, and Silky Tea-tree *Leptospermum myrsinoides* was in bloom.

A stop at the Smythes Creek cemetery, a 1 acre block along the Glenelg Highway allowed us to see and taste Honeypots *Acrotriche serrulata*; more Nodding Greenhoods were seen, and a small tombstone inscribed with Chinese characters. There are few overt indications of burials here.

We returned via Bunkers Hill, possibly a future source of gravel for Golden Plains Shire. A very degraded block, with mullock heaps, it nevertheless contained some good hollow trees - Rough-barked Manna Gums - above the grassy bracken-covered ground. A couple of large raggedy nests were seen high up but we could only guess at their identity.

Editor.

Friends
of
Mt. Beckworth
Wildflower Walk
Sunday October 21
Meet at The Dam 1.30 pm

Maryborough Field Naturalists' Club
50th Anniversary
Saturday 22nd September
11am Bushwalk
12noon BBQ Lunch
2-4pm Formal Proceedings
RSVP: 12 September
Secretary Ph.

Calendar

September

- Fri. 7 Meeting: Pat & Bill Murphy - *Orchids of the Ballarat District*.
 Sun. 9 Excursion: *Native Gardens*.
 Mon. 17 Mid-month Excursion: Dereel Lagoon.
 Wed. 19 Committee Meeting @ John Gregurke's 7.30pm
 Mon. 24 Booklet Meeting @ John Gregurke's 3pm

October

- Fri. 5 **Stella Bedggood Memorial Lecture:** Prof. Ian Plimer
A History of the World in 45 Minutes. Please bring supper to share.
 Sun. 7 Excursion to Skipton with David Hay.

Supper Duty for September: Maureen Christie & Kay Preston
October: Committee and helpers.

Committee

President Mrs. Carol Hall
Vice-President Mr. Greg Binns
Secretary Mr. John Gregurke
Treasurer Mr. Bob Curtain

Miss Helen Burgess.....
 Miss Maureen Christie.....
 Mrs. Claire Dalman.....
 Mr. Lyndsay Fink.....

Mrs. Carol Hall (Editor).....
 Mr. Les Hanrahan.....
 Mr. John Mildren.....
 Ms. Gail Whyte.....

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Meetings are held at the Ballarat Horticulture Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Creswick Plaza, Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30am unless otherwise specified.

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